***TEMPORENA* IREDALE UNRAVELLED.** *Memoirs of the Queeensland Museum 42(2): 604. 1998:-* Iredale (1933) erected *Temporena* as a subgenus of *Gnarosophia* Iredale, 1933 to accomodate a large striped camaenid, *Helix whartoni* Cox, 1871 from Holbourne I., off Bowen, mideastern Qld (Fig. 1). *Gnarosophia* also included a number of large camaenids from the Wet Tropics Biogeographic Region as well as *G. mitifica* Iredale, 1933 (=nom. nov. for *Helix incei* var. *multifasciata* Cox, 1864 non Weinland & Anton, 1857) (Fig. 2). In his original description Cox (1864) recorded the locality of *G. mitifica* as 'Marked. Cape York', which in the context of that publication suggested that he was suspicious of its origins because for all other entries the locality was given without qualification. Subsequently, Cox (1868) figured this specimen as a large form of *Helix incei* Pfeiffer (1845) (confirmed on one of the specimen labels in Cox's handwriting) and at that stage considered that it came from Wide Bay, SE Qld. Presumably because he felt that it was conspecific with a similar looking shell, a form of *H. incei*, which was then considered to come from this area (Cox, 1868). This Wide Bay species was later described as *Helix bayensis* Brazier, 1875. Cox (1909) synonymised his *multifasciata* with *H. bayensis* (as confirmed by a corrected specimen identification label in Cox's handwriting), however, Iredale (1933) considered that *G. mitifica* was a distinct species related to *T. whartoni*.

Iredale (1937) raised *Temporena* to generic rank and also included the poorly localised *G. mitifica*. More recently Smith (1992) regarded *G. mitifica* as conspecific with *T. whartoni* and also synonymised *Temporena* with a convenient portmanteau taxon, *Sphaerospira* Mörch, 1867. However, Stanisic (1996a, b) alluded to the probable polyphyletic make-up of *Sphaerospira* sensu Smith, 1992 and discussed the basis for a complete revision of the group.

An analysis of shell microsculpture and reproductive anatomy of these species which was undertaken by the author shows that *Temporena whartoni* has a shell sculptured with very fine and extremely crowded, radial periostracal wrinkles. The animal has a penis which internally possesses a verge, single longitudinal pilaster and densely scattered pustules apically and fine longitudinal ridges basally. Examination of the periostracal microsculpture of the holotype of *G. mitifica* reveals relatively gross, comparatively widely separated and obliquely disposed ridglets (as opposed to the fine, almost axial, crowded ridglets in *Temporena*) and is typical of that found in the large striped camaenids which occur between Townsville and Cardwell, NE Qld. Comparison of type of *G. mitifica* with shells in the Queensland Museum indicates that it actually comes from the Palm Is, north-east of Townsville. The penis interior of this latter group of species has a more complicated pilaster pattern than that seen in *Temporena* (Stanisic, unpubl.). These differences are considered by the author sufficient not only to identify these camaenids as separate species but also to warrant their generic separation.

A study of additional material in the Queensland Museum reveals that *Temporena* comprises a relatively large group of species characterised by variously striped shells which all have fine periostracal sculpture and internal penial morphology similar to that of *T. whartoni*. These species are distributed south of the Townsville-Cardwell group of large camenids between Longford Ck, N of Proserpine and Cape Upstart, SE of Ayr, mideastern Qld. The type species is confined to Holbourne I.

The convoluted nature of this taxonomic odyssey has resulted from past reliance on shell size, shape and colour pattern for separating both genera and species within the group of large striped Qld camaenids. This has led to a classification which is flawed by the failure to recognise the intraspecific variability of species in size, shape and colour pattern of the shell as well as convergences in these characters between often distantly related species. The confusion is poignantly illustrated by the fact that one of two paratypes of Cox's *multifasciata* in the Australian Museum (AMSC107645) is a specimen of *T. whartoni*.

Literature Cited

COX, J.C. 1864. Catalogue of Australian land shells. (John Alex Engel: Sydney).

1868. A monograph of Australian land shells. (William Maddock: Sydney).

1901. An alphabetical list of Australian land shells. (Frederick W. White: Sydney).

IREDALE, T. 1933. Systematic notes on Australian land shells. Records of the Australian Museum 19: 37-59.

IREDALE, T. 1937. A basic list of land Mollusca of Australia. Part II. Australian Zoologist 9: 1-39.

SMITH, B. J. 1992. Non-marine Mollusca. Pp. 1-405. In Houston, W.W.K. (ed.), Zoological Catalogue of Australia. (Australian Government Publishing Service: Canberra).

STANISIC, J. 1996a. The large camaenids of mideastern Queensland. Australasian Shell News 92: 1-2.

1996b. A new camaenid land snail from the Wet Tropics Biogeographic Region, northeastern Queensland (Eupulmonata: Camaenidae). Memoirs of the Queensland Museum 39(2): 355-363.

J. Stanisic, Queensland Museum, PO Box 3300, South Brisbane 4101, Australia; 5 May 1998.

Fig. 1. *Helix whartoni* Cox, 1871. Holotype, BMNH1880.12.11.6.

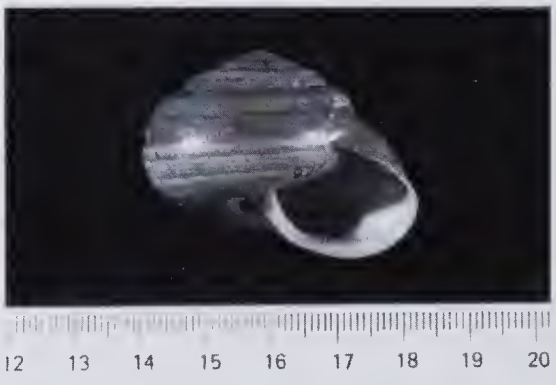

Fig. 2. *Gnarosophia mitifica* Iredale, 1933. Holotype, AMSC100628.